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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,605

09/16/2003

Robert T. Bigelow

BA-U-SIM-00010

6384

7590

10/16/2006

Franklin E. Gibbs, Esq.
Bigelow Aerospace
1899 W. Brooks Avenue
Las Vegas, NV 89032

EXAMINER

SAADAT, CAMERON

ART UNIT

PAPER NUMBER

3714

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,605

Applicant(s)

BIGELOW, ROBERT T.

Examiner

Cameron Saadat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

In response to remarks filed 6/1/2006, claims 1-19 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raboin et al. (USPN 6,547,189; hereinafter Raboin) in view of Taylor (USPN 6,439,508).

This holding, incorporated herein, is maintained from the prior action for the cited claims as amended. Response to the applicant's remarks are provided below and incorporated herein.

Regarding claims 1, and 17-19 Raboin discloses a modular human habitat system comprising: an inflatable housing having a rigid wall (See Col. 3, lines 45-48) defining an internal volume 100, a longitudinal axis, first and second opening 106 being opposed along the longitudinal axis (Col. 6, lines 55-66; Col. 10, lines 24-29), an external surface, and the rigid wall having an interior surface of generally the shape of a deployed inflatable shell 200, and the internal volume being substantially that of a deployed inflatable modular human habitat volume; a first distal enclosure having a first and second end 106 being opposed along a longitudinal axis, a first aperture on the first end and a second aperture on the second end forming a passage therethrough, and the first distal enclosure is connected to the housing such

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that the passage aligns with the first opening of the housing thereby providing access to the internal volume (See Fig. 1); and a second distal enclosure having a first end and a second end being opposed along a longitudinal axis, a hollow interior, and a first opening on the first end and the second distal enclosure being connected to the housing such that a passageway is formed between the hollow interior and the internal volume. See Col. 21, lines 2-18; Fig. 1. Raboin discloses all of the claimed subject matter with the exception of explicitly disclosing that the modular human habitat system is a simulator. However, Taylor teaches that it is well known to fabricate a human habitat system in a prototype design and in order to provide testing in a simulated environment (Col. 6, lines 34-38). Thus, in view of Taylor, it would have been obvious to one of ordinary skill in the art to modify the human habitat system described in Raboin, by testing the system in a simulated environment, in order to discover necessary modifications before actual deployment.

Regarding claim 2, Raboin discloses a modular human habitat system further comprising at least one longeron fixedly attached to, and extending from, the first distal enclosure through the internal volume and fixedly attached to the second distal enclosure. Col. 6, lines 55-65.

Regarding claim 3, Raboin discloses a modular human habitat system further comprising at least one window extending through the rigid wall into the internal volume. See Col. 26, lines 55-65.

Regarding claim 4, Raboin discloses a modular human habitat system further comprising an opening on the second end of through the second distal enclosure thereby forming a passage to the internal volume. See Col. 28, lines 34-43.

Regarding claim 5, Raboin discloses a modular human habitat system further including a portion of a simulated debris shield fixedly attached to the external surface. Col. 24, line 66 – Col. 25, line 10.

Regarding claim 6, Raboin discloses a modular human habitat system further including a plurality of simulated water bags fixedly attached to the interior surface. See Col. 7, lines 38-56.

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Regarding claim 7, Raboin discloses a modular human habitat system further comprising; a floor structure; means for supporting the floor structure; and the floor structure extending substantially the length of the longitudinal axis and substantially dividing the internal volume into an upper internal space and a lower internal space. Col. 9, lines 1-63.

Regarding claim 8, Raboin discloses a modular human habitat system further comprising at least one access opening 104 in the floor structure. See Fig. 9.

Regarding claim 9, Raboin discloses a modular human habitat system further comprising; a plurality of floor structures; means for supporting the plurality of floor structure; and the plurality of floor structures extending substantially the length of the longitudinal axis and substantially dividing the internal volume into a plurality of internal spaces. See Col. 9, lines 1-63; Figs. 8-9.

Regarding claim 10, Raboin discloses a modular human habitat system further comprising at least one access opening 104 in at least one floor structure. See Fig. 9.

Regarding claim 11, Raboin discloses a modular human habitat system further including a plurality of cylinders disposed within, and fixedly attached to, the first distal enclosure. Col. 20, lines 51-65; Col. 6, lines 55-65.

Regarding claim 12, Raboin discloses a modular human habitat system further including a plurality of cylinders disposed within, and fixedly attached to, the second distal enclosure. Col. 20, lines 51-65; Col. 6, lines 55-65.

Regarding claim 13, Raboin discloses a modular human habitat system further including a plurality of cylinders disposed along, and fixedly attached to, the external surface of the first distal enclosure. Col. 6, lines 55-65; Col. 20, lines 51-65.

Regarding claim 14, Raboin discloses a modular human habitat system further including a plurality of cylinders disposed along, and fixedly attached to, the external surface of the second distal enclosure. Col. 6, lines 55-65; Col. 20, lines 51-65.

Regarding claim 15, Raboin discloses a modular human habitat system further including a plurality of simulated panels fixedly attached to the interior surface. See Fig. 1.

Regarding claim 16, Raboin discloses a modular human habitat system further including a plurality of cylinders fixedly attached to the interior surface. Col. 6, lines 55-65; Col. 20, lines 51-65.

Response to Arguments

Applicant's arguments filed 6/1/2006 have been fully considered but they are not persuasive. Applicant emphasizes that Raboin discloses a rigid structural core, but does not disclose a rigid outer shell since the shell is inflatable. The examiner respectfully disagrees. Although the housing disclosed in Raboin does not consist solely of a rigid shell, Raboin discloses the claimed limitation of providing a housing having a rigid wall. It is noted that claims are given their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). Claim 1 recites the following claim limitation, "a housing having a rigid wall defining an internal volume". Although Raboin discloses a vessel having an inflatable shell, the inflatable shell is capable of interfacing with rigid structural interfaces such as an airlock, entry hatch, window, and inflation-monitoring ports. See Raboin, Col. 3, lines 45-48. Raboin discloses a housing having an inflatable shell that interfaces with rigid walls, and therefore meets the claimed limitation of providing a housing having a rigid wall defining an internal volume.

Applicant additionally asserts that the claimed invention is a simulator. However, it is noted that the recitation of "simulator" has not been given patentable weight because the recitation occurs in the

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preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The examiner suggests positively reciting claim limitations in the body of the claim, having simulation or simulator-related elements in order to help distinguish over the prior art of record.

It is further argued that there is no suggestion to combine the references. The examiner respectfully disagrees. "There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Raboin discloses all of the claimed subject matter with the exception of explicitly disclosing that the modular human habitat system is a simulator. However, Taylor teaches that it is well known to fabricate a human habitat system in a prototype design and in order to provide testing in a simulated environment (Col. 6, lines 34-38). In view of Taylor, it would have been obvious to one of ordinary skill in the art to modify the human habitat system described in Raboin, by testing the system in a simulated environment, in order to discover necessary modifications before actual deployment.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,429,851 (Sallee) – discloses a habitat structure having an expandable, rigid outer shell.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

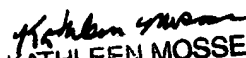
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is (571) 272-4443. The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on (571) 272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Cameron Saadat
October 3, 2006


KATHLEEN MOSSER
PRIMARY EXAMINER